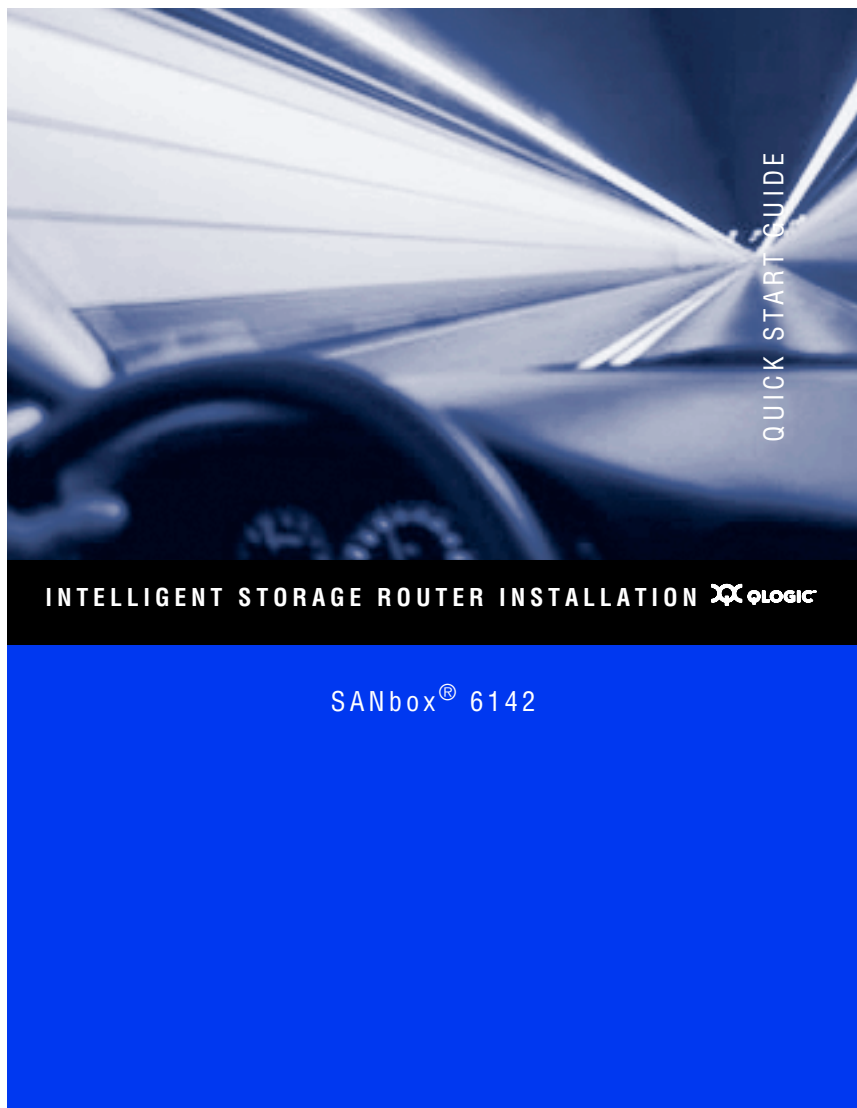


[Quick Start Guide]



QUICK START GUIDE

INTELLIGENT STORAGE ROUTER INSTALLATION **X-LOGIC**

SANbox® 6142

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Quick Start Guide

SANbox 6142, an intelligent Storage Router, provides remote and local SAN island connectivity. The major applications are:

- ☐ Remote Data Replications between Fibre Channel (FC) storage arrays
- ☐ Connecting remote FC Servers to local FC storage
- ☐ Connecting iSCSI Storage to FC storage area network (SAN)
- ☐ Allocating Resources (FC storage arrays, FC Virtual Tape Libraries, and FC tapes) from different SANs within the data center to FC servers and/or iSCSI servers without worrying about E-port compatibility.

Suggested Configurations

Figure 1 connects local Array 1 to remote Array 2 and the Server from local SAN to Storage from a remote SAN.

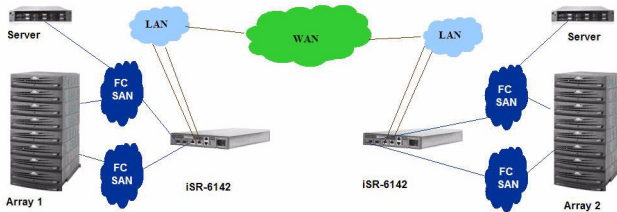


Figure 1. Connect Remote SAN Islands

Figure 2 provisions FC storage from one SAN to an FC server on different SAN and/or provisions FC storage to iSCSI Servers.

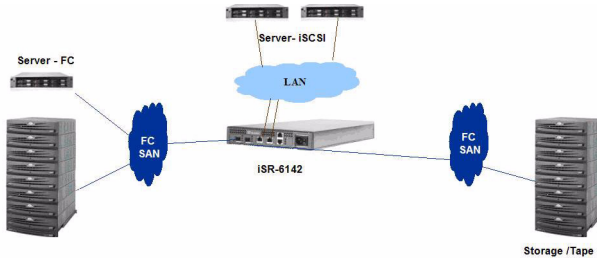


Figure 2. Connect Local SAN Islands and iSCSI Servers to Fibre Channel SAN

Installation Instructions

This Quick Start Guide describes how to install and configure your new QLogic SANbox® router by following these steps:

- ☐ Step 1. Verify the package contents.
- ☐ Step 2. Pre-installation checklist
- ☐ Step 3. Mount the router.
- ☐ Step 4. Install the SFPs.
- ☐ Step 5. Apply power to the SANbox 6142 Router.
- ☐ Step 6. Install the SANsurfer® Router Manager.
- ☐ Step 7. Configure SANbox 6142 management port IP address.
- ☐ Step 8. Run the configuration wizard.
- ☐ Step 9. Configuring SANbox 6142s for connecting remote SANs
- ☐ Step 10. Configuring SANbox 6142s for connecting FC/iSCSI initiators to FC/iSCSI targets

Step 1. Verify the Package Contents

The QLogic SANbox 6142 Router is shipped with the following items:

- ☐ SANbox 6142 Router (1)
- ☐ Small Form Factor Pluggable (SFP) transceivers (2)
- ☐ AC power cord (1), CD (1), and Serial adapter (1)

Optional equipment:

- ☐ Shelf for Rack Mount

Step 2. Pre-installation Checklist

During the initial configuration process, the user will be requested to input the following parameters. Please write down the IP addresses in the space provided.

Parameter	Value
Symbolic Name of this SANbox 6142	
IP address (if not using DHCP) for the management port in the SANbox 6142	
IP address, subnet mask & gateway (if applicable) for the GE 1 (iSCSI port 1)	
IP address of the iSNS server for iSCSI Port 1 (if iSNS will be enabled)	
IP address, subnet mask & gateway (if applicable) for the GE 2 (iSCSI port 2)	
IP address of the iSNS server for iSCSI port 2 (if iSNS will be enabled)	

Step 3. Mount the Router

Mount the SANbox 6142 using the shelf, if purchased.

Step 4. Install the SFPs

An SFP transceiver is required for each of the router's FC ports that will be connected to a Fibre Channel device or switch. SFPs are included in the package.

To install an SFP transceiver, insert the transceiver into the router port and press gently until it snaps in place. The transceiver will fit only one way. If the transceiver does not install under gentle pressure, flip it over and try again.

Step 5. Apply Power to the SANbox 6142 Router

Figure 3 shows the location of the ports and LEDs on the SANbox 6142 Router.

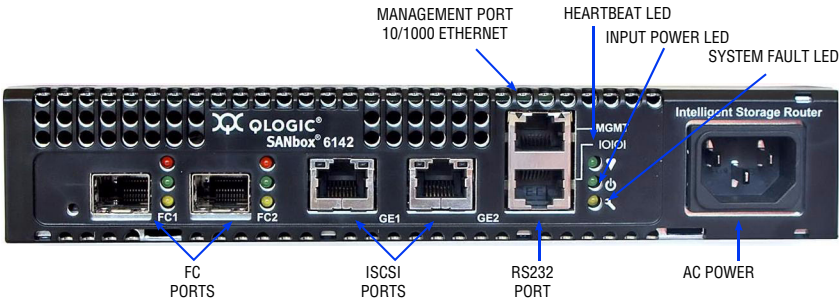


Figure 3. SANbox 6142 Ports and LEDs

Attach the AC power cord to the SANbox 6142 Router and then to the wall outlet or power strip. Verify that the router's input power LED is illuminated. The Router first runs its self-test, which takes about one minute, then begins normal operation. Verify that the heartbeat LED is blinking (once per second) and that the system fault LED is not illuminated.

Step 6. Install the SANsurfer Router Manager

Management Console - System Requirements:

The SANbox 6142 Router comes with QLogic's SANsurfer Router Manager application. (The Router management console can be a Windows, Solaris, Linux or MAC OS-X based workstation or server.)

The SANsurfer Router Manager application includes the Configuration Wizard, which auto-detects and configures the SANbox 6142 Router based on selected options and recommended settings. To install the SANsurfer Router Manager application on a Windows workstation/server, perform the following steps:

1. Insert the QLogic CD into the CD-ROM drive of the Windows workstation/server.
2. A list of supported platforms will be displayed. Locate the appropriate platform and click Install.
3. If the product introduction screen does not display, open the QLogic CD with Windows Explorer and run the installation program, located in the following path:
autoplay\SANsurferMgmtSoftware\Windows\SR-614x_windows_install.exe

For other OS Platforms please install appropriate packages. The CD subdirectory names identify the OS.

Step 7. Configure SANbox 6142 Management Port IP Address

Connect the router's 10/100 Ethernet port to your workstation using a switch or hub. Alternatively you may connect your workstation directly to the router using an Ethernet crossover cable.

The SANbox 6142 management port's default IP address is 10.0.0.1 subnet 255.0.0.0. Please make sure the workstation connected to the SANbox Router has Ethernet address 10.0.0.x, where x is other than 1 and subnet mask is 255.0.0.0.

From the workstation, open a command window and using a telnet session, connect to SANbox 6142 using IP address 10.0.0.1. Login as "guest" and use the password "password". This will take you to a CLI prompt as shown in figure 4.

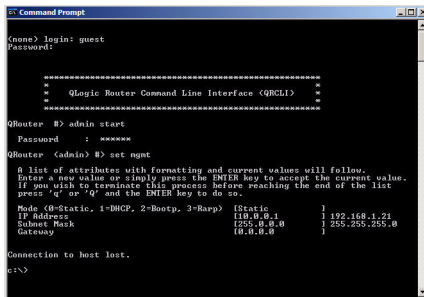


Figure 4. QLogic Router Command Line Interface

Enter CLI command "admin start". Default password is "config". Enter "set mgmt" at the QRouter (admin) #> prompt.

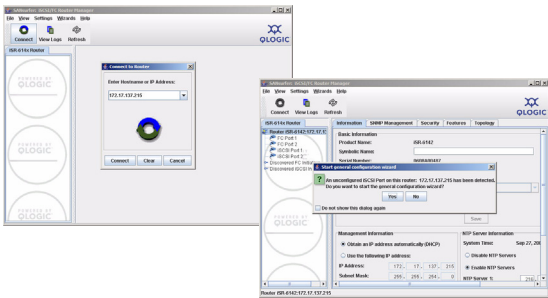
Select the mode. We recommend you use static address. Select Option 0 (Static), next enter the IP address, Subnet Mask and Gateway.

You will lose the connectivity of the telnet session at this time. If you want to continue using the CLI, restart the telnet session with the IP address you just assigned to the management port.

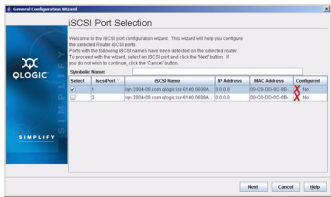
You now have the management port configured with the appropriate IP address. Connect the management port cable to your Ethernet network. Connect cables to GE1, GE2, FC 1, and FC 2 cables as shown in the configuration diagrams (figure 1/figure 2).

Step 8. Run the Configuration Wizard

- 1. Invoke the SANsurfer® Router manager previously installed on the computer that will be used to manage the SANbox 6142. You should see a display as shown in the following figures.
- 2. Select the “Connect” button on the top left corner.
- 3. Enter the IP address of the SANbox 6142 you want to configure.



- 4. If you select “yes” to start the configuration wizard your display will change to:



- 5. Enter the Symbolic Name for this router
- 6. Select each iSCSI Port and follow the Wizard to enter IP addresses for the iSCSI Port, and optionally, the IP address of an iSNS Server.
- 7. When saving the changes, the default password is “config”.

Copy the FC WWPN (World Wide Port Names) for both FC Ports. You will need these names to present LUNS from your Storage subsystem.

FC 1 WWPN	
FC 2 WWPN	

If you have an NTP server, enable the NTP Server and enter the NTP Server information. This is located in the GUI Screen on the Information tab when the router is selected in the System Tree view.

To connect to remote SANs, continue with [step 9](#).

To connect FC/iSCSI initiators to FC/iSCSI targets, continue with [step 10](#).

Step 9. Configuring SANbox 6142s for Connecting Remote SANs

Configuration requirement:

- ☐ At least one FC Port of the SANbox 6142 should be connected to a FC SAN.
- ☐ It is recommended to use Fibre Channel World Wide Port name (WWPN) based zoning. Add each SANbox 6142 router's FC WWPN to all zones in the FC switch to which it is connected. The FC switch zoning changes allow the SANbox 6142 router to discover all devices in the FC SAN.

Additional requirement for remote SAN island connectivity:

- ☐ The iSCSI/GE port IP addresses of both local and remote routers must be set so that the routers are accessible to each other.
- ☐ The management port IP address of both local and remote routers must be set so that the routers are accessible to each other.
- ☐ It is recommended that you have installed SmartWrite™ feature (License) on each router.

Associate remote SANbox 6142 to local SANbox 6142:

Using GUI:

Invoke SANSurfer™ Router Manager and connect to a local SANbox 6142 using management port IP address.

Run "Add remote router" Wizard by selecting pull-down wizard menu.

- ☐ Enter remote router management port IP address and select Next.
- ☐ Enter the local router password (default password is "config") in the password dialog box.
- ☐ Enter the remote router password (default password is "config") in the password dialog box.
- ☐ Status information screen displays the status of this operation.

Using CLI:

Use the "remotep eer add" command to associate the local and remote routers.

"show remotep eer" CLI command will show the list of remote Routers.

Refer to Appendix A in the *SANbox 6142 Intelligent Storage Router User's Guide*.

Import FC Devices from remote SAN to local SAN:

Using GUI:

Run "Map Remote Initiator/Target" Wizard to establish connection between local and remote devices.

- ☐ Select the Device to be mapped by expanding the router tree.
- ☐ Select Next button to select the other device for this mapping.
- ☐ Upon selecting the next button, if "SmartWrite™" licenses are enabled, SmartWrite™ features are displayed.
- ☐ Please enable SmartWrite™.

-
- ☐ If round-trip latencies are greater than 50 ms or WAN line rate is DS-3 (4500Mb/Sec) or less, enable compression.
 - ☐ Except for mapping of tape devices, select load balancing.
 - ☐ On next screen, confirm the summary of this change.
 - ☐ On next screen, enter the local router's password.
 - ☐ Status screen displays the status of this operation.

Using CLI:

Use "remotemap add" CLI command.

Congratulations! You have now successfully installed your QLogic SANbox 6142s and mapped the FC devices from remote SAN to local SAN.

Refer to the section on Performance Tuning in the *SANbox 6142 Intelligent Storage Router User's Guide* for optimal parameter settings.

Step 10. Configuring SANbox 6142s for Connecting FC/iSCSI Initiators to FC/iSCSI Targets

Using GUI:

Run "Map Local Initiator/Target" wizard to establish connection between devices.

- ☐ Select Initiator Device (FC or iSCSI).
- ☐ Select a Target Device.
- ☐ If you selected an iSCSI initiator, select the FC port on which this initiator is to be presented. The FC WWPN for this iSCSI initiator is automatically assigned. It is not recommended to change the assigned FC WWPN for this initiator.
- ☐ Select Target presentation port and iSCSI target name.
- ☐ The next screen displays the device mapping information. Verify the information before confirming.

Using CLI:

Use the "localmap add" command to map an FC or iSCSI initiator to an FC or iSCSI target.

Refer to Appendix A in the *SANbox 6142 Intelligent Storage Router User's Guide*.

Congratulations! You have now successfully installed your QLogic SANbox 6142 and mapped your iSCSI/FC servers to iSCSI/FC storage.

Troubleshooting and Technical Support

For technical support, visit our web site, support.qlogic.com, email us at support@qlogic.com, or call 952-932-4040.

Warranty

The QLogic SANbox 6142 Router comes with a standard one-year QLogic warranty, or as specified by other agreements. Please check the QLogic Web site at www.qlogic.com for warranty details.

Regulatory Information (Preliminary)

The following sections contain a summary of EMC/EMI test specifications performed on the QLogic SANbox 6142 Router to comply with radiated emission, radiated immunity, and product safety standards.

Safety Standards

UL60950 (USA)
CSG 22.2 No. 60950 (Canada)
EN 60950 (EC)
CB Scheme-IEC 60950

Harmonics

EN 61000-3-2

Immunity

EN 55024:1998

Emission Standards

FCC Part 15B Class A (USA)
VCCI Class A ITE (Japan)
ICES-03 Issue 3 (Canada)
EN55022 Level A (EC)
CISPR 22, Class A

Voltage Fluctuations

EN61000-3-3

Marking

FCC Part 15
UL (United States)
TUV (United States)
cUL (Canada)
cTUV (Canada)
TUV Europe (Germany)
VCCI
CE
GOST
MIC
BSMI/RRL

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